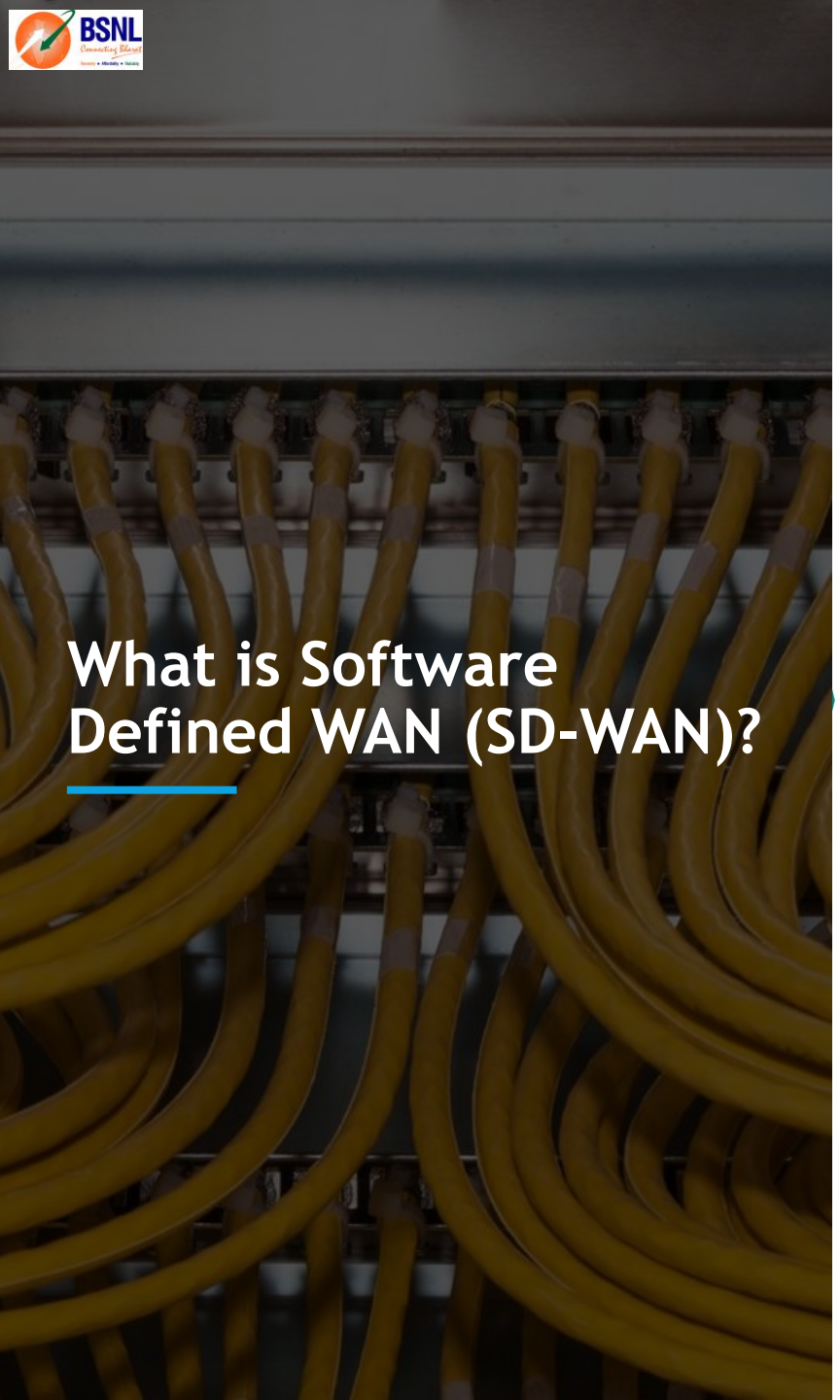

Software Defined - WAN



# What is Software Defined WAN (SD-WAN)?

Our SD-WAN **virtualizes the WAN**, enabling centralized, software-based traffic management

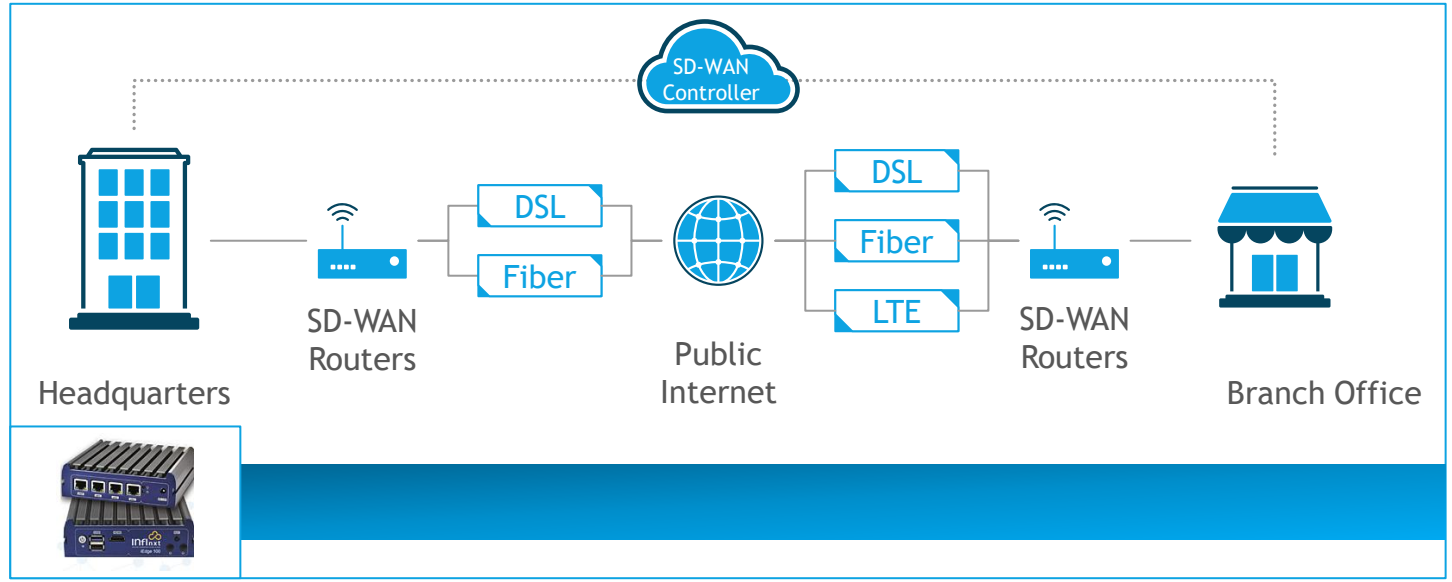
It **combines broadband, 4G/LTE, and MPLS** into one network, routing data in real time over the best link

A **central controller manages the entire network**—no need to configure routers individually

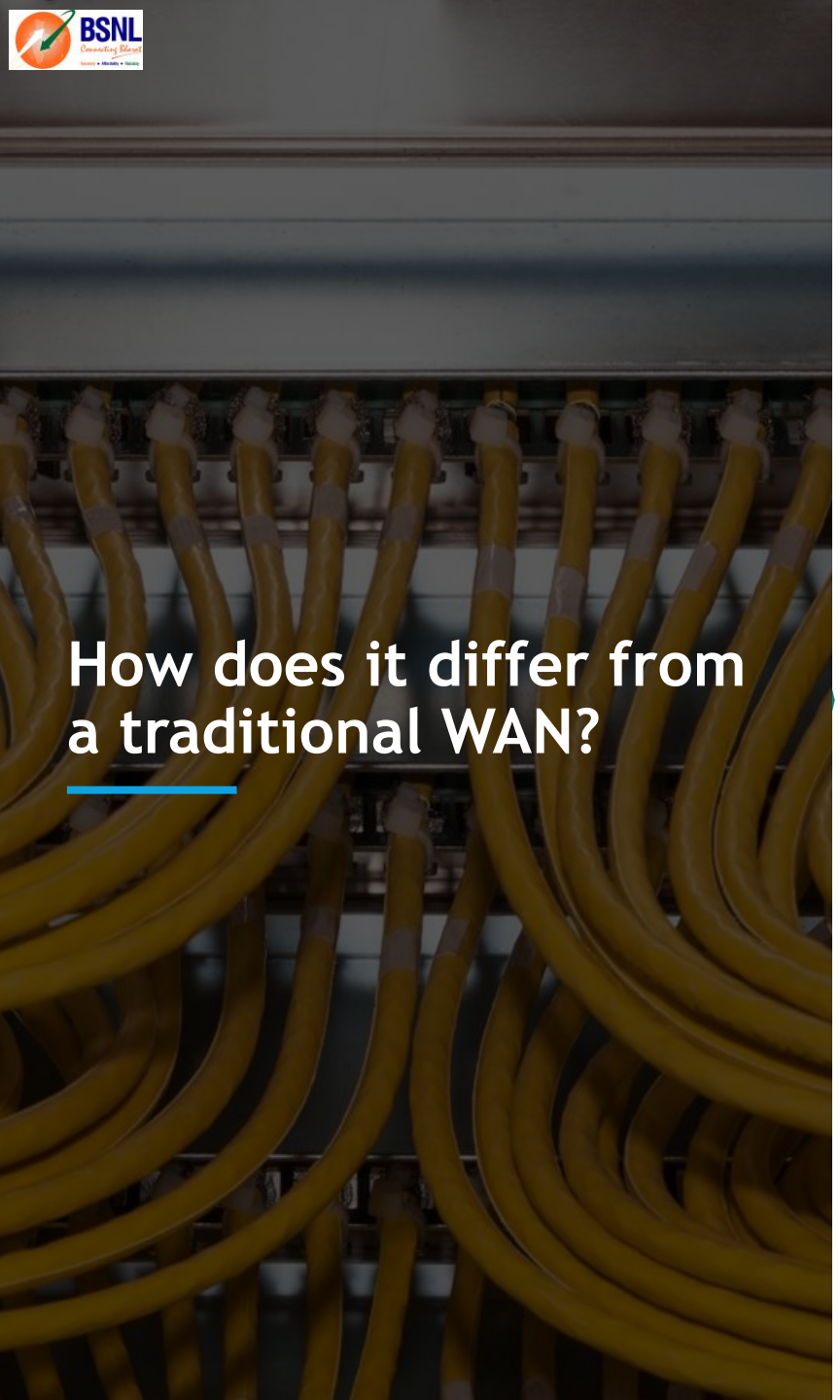
Our SD-WAN intelligently recognizes different applications and **prioritizes critical business traffic**

# BSNL SD-WAN : Built for Enterprise

## SD-WAN architecture




- A Single box to meet various requirements
- B Leverage lower cost links to provide MPLS like connectivity
- C Have Application Aware routing etc. which provide flexibility in routing different traffic flows as per customer need
- D Zero Touch Provisioning reduces requirement of skilled man power
- E Single pane of glass for all reports
- F Easy to change the Bandwidth and other QoS parameters
- G Any feature/service can be added with minimal effort



# How does it differ from a traditional WAN?

Traditional network architectures often lead to **inefficient traffic routing and increased latency** because all traffic must constantly flow back to central data centers for filtering.

SD-WAN technology offers a **cost-effective alternative** by eliminating the need for expensive MPLS circuits.

SD-WAN simplifies **Quality of Service (QoS) management**.

SD-WAN enables **better prioritization of critical applications** across the Wide Area Network (WAN).

# SD-WAN offerings are tailored for SME, global, retail, security-sensitive, and cloud-first use cases

| Use Case | Description |
|---|---|
| SME/ Regional WAN | • Typically <50 sites, same region<br>• Mainly internet access<br>• Increasing SaaS reliance |
| Large Global WAN | • >300 sites, multiple regions<br>• Emphasis on WAN & SaaS optimization and scalability |
| Small Footprint Retail WAN | • >200 sites- must have security<br>• Limited # apps- PoS, inventory, etc<br>• E.g., Gas stations, ATMs, etc |
| Security-Sensitive WAN | • Need full security suite, e.g., Unified threat mgmt., Next Gen Firewall<br>• Key verticals- FS.,Gov. etc |
| Cloud-First WAN | • Mainly cloud, limited on-prem DCs<br>• SaaS opt. & cloud orchestration key |


# Why does your business need Software Defined - Wide Area Network (SD-WAN)? (1/2)

1

## Cost Optimization over Traditional WAN

- Significantly reduces total cost of ownership (TCO) for your WAN.
- Maximizes return on investment (ROI) by ensuring efficient resource utilization.

2

## Centralized Control & Application-Aware Routing

- Provides unified, policy-driven network management from a single console.
- Enables intelligent, real-time application performance across your network.

# Why does your business need Software Defined - Wide Area Network (SD-WAN)? (2/2)


3

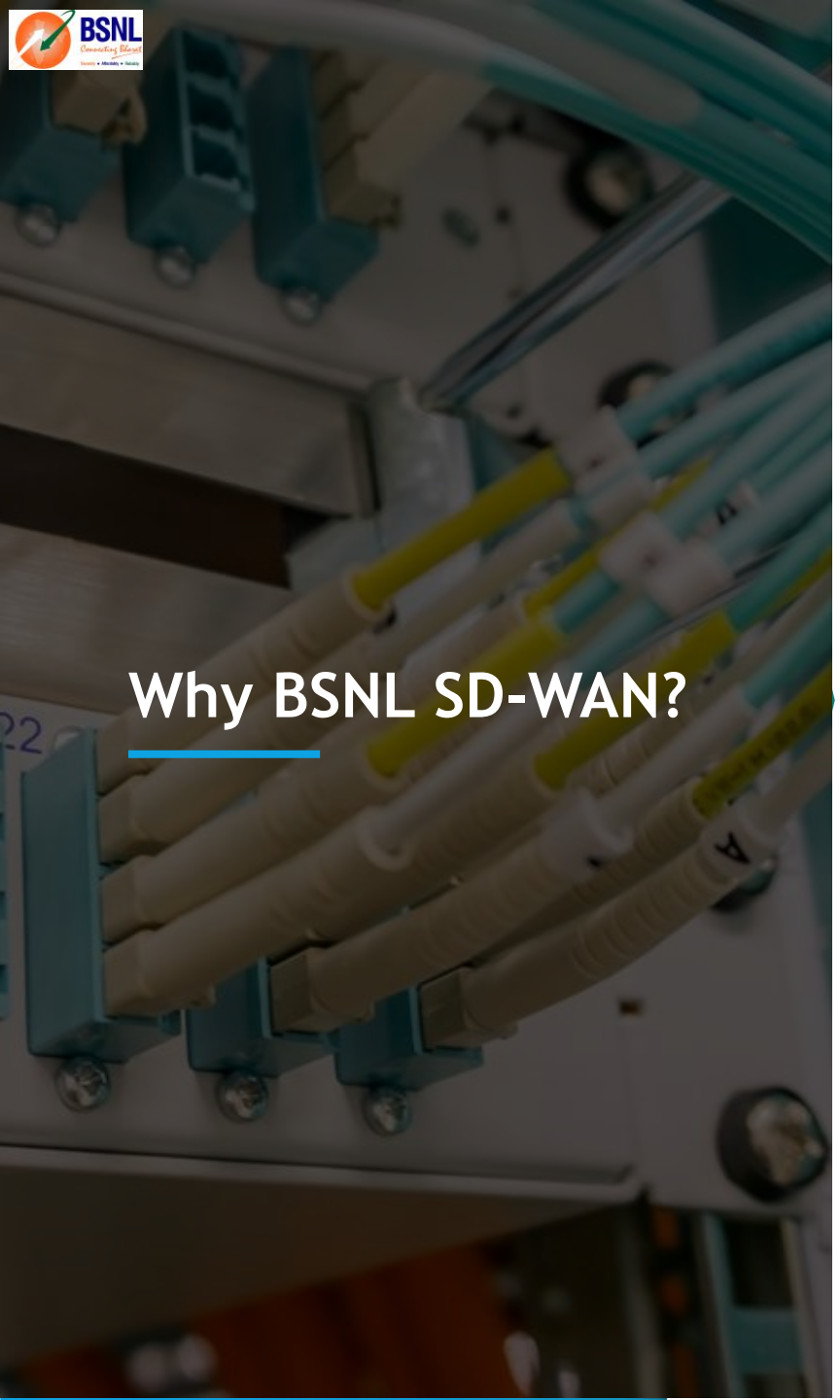
### Improved Cloud & SaaS Performance

- Optimizes cloud and SaaS access for a superior user experience.
- Ensures consistent, high-quality performance for all cloud-based applications.

4

### Enhanced Security and Branch Agility

- Provides robust, built-in security including encrypted tunnels for distributed enterprises.
- Enables rapid branch deployment and enhanced network flexibility for evolving business needs.



# Why BSNL SD-WAN?

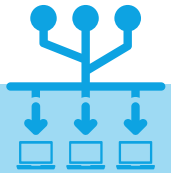
**Carrier-grade SD-WAN** solution backed by BSNL's engineering expertise

BSNL can integrate SD-WAN overlays with its national fiber backbone & MPLS network for a **truly seamless solution**

BSNL serves as a **one-stop-shop** for your connectivity and the SD-WAN overlay that binds them

BSNL offers **Service Level Agreements** for uptime and performance on the managed SD-WAN

# BSNL's SD-WAN service comes with a rich set of features and options tailored for enterprise needs



01

## WAN Optimization

Accelerates application performance by 70-90% through data de-duplication, compression, and caching, optimizing traffic and enhancing

02

## Zero-Touch Provisioning

Automates branch deployment with plug-and-play configuration. Devices self-configure, eliminating manual setup and reducing deployment time for new sites.

03

## Link Aggregation

Combines diverse network links (MPLS, broadband, LTE) into a single, high-speed connection. Maximizes bandwidth and ensures resilient connectivity by pooling all available network capacity.

04

## Resilience & Smart DNS

Ensures continuous uptime with automatic failover and recovery. Smart DNS intelligently routes traffic to the best available path, preventing downtime during outages.